

REMARKS

Claims 1, 3, 6, 9, 10, 25 and 26 have been amended. Claims 10-15 have been allowed.
Claims 1-6, 9-26.

Claim Rejections – 35 U.S.C. 112

Claim 6 was rejected because the phrase “integrated voltage source” was unclear. Claim 6 has been amended to recite “a voltage source integrated into the radiation sensor.” This clarifies that the radiation sensor comprises a voltage source. Support is found in the specification at page 6, lines 5-16. No new matter has been added.

Claim 9 was rejected as dependent from a canceled claim. Claim 9 has been amended to depend from claim 10.

Applicants respectfully request withdrawal of the 35 U.S.C. 112 rejections of claims 6 and 9.

Claim Rejections – 35 U.S.C. 102

Claims 1 and 2 were rejected as allegedly being anticipated by U.S. Pat. No. 5,694,448 to Morcom.

Claim 1 has been amended to recite that the radiation sensing circuit includes a radiation-sensing transistor. This element is incorporated from claim 3 and also is disclosed in the specification at page 3, lines 8-12. No new matter has been added. Claim 3 has been amended to delete the recitation of the radiation-sensing transistor.

In contrast, the Morcom reference discloses using a charge-coupled device (CCD) to detect a radiation dose. The CCD of Morcom is used as an imaging device including radiation sensitive detector elements. Col. 1, lines 43-45. A CCD is an integrated circuit containing an array of linked, or coupled, capacitors. Morcom discloses using a signal derived from the CCD to determine the onset of irradiation from an X-ray source. (Abstract)

Thus, Morcom discloses using a CCD, not a radiation-sensitive transistor to detect the radiation dose. Claim 1 is not anticipated by Morcom because that reference does not disclose each and every recited element.

The Applicants respectfully request the withdrawal of the 35 U.S.C. 102 rejection of claim 1.

Claim 2 depends from claim 1 and should be allowable for at least the same reasons.

Claim Rejections – 35 U.S.C. 103

Claims 1-6, 25 and 26 were rejected under 35 U.S.C. 103 as allegedly being unpatentable over “CMOS Radiation Sensor with Binary Output” (Moreno et al.) in view of U.S. Pat. App. 2001/0019285 of Lin et al. The Applicants respectfully traverse this rejection.

Claims 1 has been amended to recite adjusting the threshold level of a radiation-sensing transistor. Claims 25 and 26 have been amended to recite a radiation-sensing transistor and a voltage source to adjust the threshold of the transistor. In the present application, adjusting the threshold of the transistor can cause the radiation-sensing transistor to respond to adjustable radiation doses. That is the present method and device can detect adjustable levels of radiation by adjusting the threshold of the radiation-sensing transistor.

In contrast, Moreno discloses a dosimeter having a CMOS radiation sensor that can detect a fixed threshold level of radiation. The radiation-dose sensitivity of the disclosed device to a fixed radiation dose has to be obtained by modifying the aspect ratio of the transistors in the sensor. (I. Introduction). The aspect ratio depends upon the transistor pair TP2-TN2 of FIG. 1. (II. Theory, page 174, col. 2). Thus, there is no suggestion in Moreno to adjust the threshold of the transistor to have the radiation sensor respond to adjustable radiation doses as in the present application.

In the Lin et al. reference there is no suggestion of a radiation sensor or a radiation-measuring circuit. The Lin et al. disclosure teaches a method and circuit for biasing transistors to increase performance with less associated leakage current in a larger circuit that senses when a signal is propagating toward the circuit path. There is motivation disclosed in Lin et al. for adjusting the threshold of a MOSFET of a radiation sensor in a radiation measuring circuit.

Thus, neither Moreno nor Lin et al. discloses adjusting the threshold of a radiation-sensing transistor as recited in claims 1, 25 and 26. Moreno teaches adjusting the sensitivity of a radiation sensor by adjusting the aspect ratio of transistors in the circuit to a fixed radiation dose. Lin et al. teaches a method of biasing transistors to increase performance. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re *Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). That is, even assuming, *arguendo*, that the references can be combined, neither reference provides any motivation or desirability to form the subject matter recited in claims 1, 25 and 26.

The Applicants respectfully request withdrawal of the 35 U.S.C. 103 rejection of claims 1, 25 and 26.

Claims 2-6 depend from claim 1 and should be allowable for at least the same reasons.

Miscellaneous

Claim 10 also has been amended to correct syntactical errors.

Conclusion

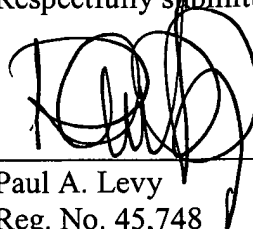
All pending claims are in condition for allowance.

The Applicants do not believe that any fees are due at this time. However, please apply any charges or credits to deposit account 06-1050.

Applicant : Keshavarzi et al.
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Respectfully submitted,

A handwritten signature in black ink, appearing to be "Paul A. Levy", written over a horizontal line.

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